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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,331	01/22/2004	Pen-Jung Lee	BHT-3244-24	2696

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EXAMINER

THOMAS, BRANDI N

ART UNIT PAPER NUMBER

2873

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/761,331

Applicant(s)

LEE, PEN-JUNG

Examiner

Brandi N. Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> .                  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Snowman (4226533).

Regarding claim 1, Snowman disclose, in figures 1 and 2, a flay type light condensing device arranged in an optical path device of an image readout said device comprising: a hollow frame (11, 12, and 13) having a rectangular cross-section configuration (col. 3, lines 57-62); first and second rectangular openings located on opposing ends thereof, the first rectangular opening receiving a light and the second rectangular opening discharging a condensed and imaged light (figure 1 and 2) (col. 5, lines 46-50 and col. 6, lines 64-67); and a plurality of lenses (16, 20, 21, and 22) located within the hollow frame (11-13) between the openings at opposite ends (figures 1 and 2), the plurality of lenses (16 and 20-22) having cross-sectional dimensions at least equal to corresponding dimensions of the first and second rectangular openings (figures 1 and 2) (col. 7, lines 14-24 and col. 10, lines 35-37).

Regarding claim 3, Snowman disclose, in figures 1 and 2, a flay type light condensing device arranged in an optical path device of an image readout, wherein said plurality of lenses (16 and 20-22) are circular (col. 7, lines 34-42), and said first and second rectangular openings at

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two ends of said frame (11-13) comprise a rectangular light incidence region (26 and 27) and a rectangular light escape region (23), respectively (col. 4, lines 53-57 and col. 6, lines 64-67).

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snowman (4226533).

Regarding claim 2, Snowman discloses, in figures 1 and 2, a flat type light condensing device arranged in an optical path device of an image readout device, wherein said plurality of lenses (16 and 20-22) are rectangular lenses locked in said frame (11-13) but does not specifically disclose that the frame is integrally formed of a material selected from a group consisting of plastic, metal or and ceramic material. It would have been obvious to fabricate the frame of a group consisting of plastic, metal, and ceramic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (In re Leshin, 125 USPQ 416). Therefore it would have been obvious to someone of ordinary skill in the art at the time the invention was made to fabricate the frame of a group consisting of plastic, metal, and ceramic for the purpose of its durability.

Regarding claim 4, Snowman discloses, in figures 1 and 2, a flat type light condensing device arranged in an optical path device of an image readout device, wherein said frame (11-13)

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comprises a plurality of rectangular sub-frames (11-13) but does not specifically disclose that the frame is integrally formed of a material selected from a group consisting of plastic, metal or and ceramic material. It would have been obvious to fabricate the frame of a group consisting of plastic, metal, and ceramic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (In re Leshin, 125 USPQ 416). Therefore it would have been obvious to someone of ordinary skill in the art at the time the invention was made to fabricate the frame of a group consisting of plastic, metal, and ceramic for the purpose of its durability.

Regarding claim 5, Snowman discloses, in figures 1 and 2, a flat type light condensing device arranged in an optical path device of an image readout device, wherein said lenses (16, and 20-22) are rectangular lenses made of plastic material (col. 8, lines 51), and are formed in corresponding sub-frames (11-13) to prevent the lenses (16 and 20-22) from deforming due to temperature (figures 1 and 2).

5. Claims 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snowman (4226533) as applied to claim 1 above, and further in view of Ushiro et al. (4939588).

Regarding claim 6, Snowman discloses the claimed invention but does not specifically disclose wherein said lenses comprises a light incidence piece, a light condensing piece set and a light splitting piece, said light incidence piece has a size corresponding to a scan size of a scanner, said light splitting piece has a size corresponding to that of a charge coupled device, and said light condensing piece set is composed of more than one lens. Ushiro et al. discloses, in figures 3 and 4, a flat type light condensing device arranged in an optical path device of an image

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readout device, wherein said lenses (11, 12, 14, 16, and 17) comprises a light incidence piece (14), a light condensing piece set (13) and a light splitting piece (17), said light incidence piece has a size corresponding to a scan size of a scanner, said light splitting piece has a size corresponding to that of a charge coupled device, and said light condensing piece set is composed of more than one lens (11 and 12) (col. 2, lines 53 and 54). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the device of Snowman with the light condensing, light splitting, and light incidence pieces of Ushiro et al. for the purpose of maintaining a light optical path (col. 2, lines 53 and 54).

Regarding claim 7, Ushiro et al. discloses, in figures 3 and 4, a flat type light condensing device arranged in an optical path device of an image readout device, wherein a charge coupled device (40) is assembled in said frame (1) (col. 3, lines 28-30).

Regarding claim 8, Snowman disclose, in figures 1 and 2, an optical path device for optical equipment, said optical path device comprising: a) a light source (14) device providing light (col. 3, lines 60-61); b) a reflecting device (26) comprising at least a reflecting mirror (col. 3, lines 60-61), each said reflecting mirror (26) reflecting said light at least once to accomplish a predetermined total track (col. 4, lines 53-62); c) a light condensing device (27) receiving light reflected by said reflecting device (26) and condensing it for imaging (col. 4, lines 53-68), said light condensing device (27) comprising a plurality of lenses (15 and 27) mounted in a hollow frame (11-13) having first and second rectangular openings located on opposing ends thereof, the first rectangular opening receiving a light and the second rectangular opening discharging a condensed and imaged light (figure 1 and 2) (col. 5, lines 46-50 and col. 6, lines 64-67); the plurality of lenses (16 and 20-22) having cross-sectional dimensions at least equal to

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corresponding dimensions of the first and second rectangular openings (figures 1 and 2) (col. 7, lines 14-24 and col. 10, lines 35-37) but does not specifically disclose an OE converter. Ushiro et al. discloses and d) an OE converter receiving light collected and imaged by said light condensing device and converting it the light into an electric signal (col. 3 61-68 and col. 4, lines 1 -4). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the device of Snowman with the OE converter of Ushiro for the purpose converting the light into an electrical signal (col. 3 61-68 and col. 4, lines 1 -4).

Regarding claim 9, Ushiro et al. discloses, in figures 3 and 4, an optical path device for optical equipment wherein said OE converter is arranged in an end of said frame of said light condensing device (col. 3 61-68 and col. 4, lines 1-4).

Regarding claim 10, Snowman discloses, in figures 1 and 2, a flat type light condensing device arranged in an optical path device of an image readout device, wherein said plurality of lenses (16 and 20-22) are rectangular lenses locked in said frame (11-13) but does not specifically disclose that the frame is integrally formed of a material selected from a group consisting of plastic, metal or and ceramic material. It would have been obvious to fabricate the frame of a group consisting of plastic, metal, and ceramic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (In re Leshin, 125 USPQ 416). Therefore it would have been obvious to someone of ordinary skill in the art at the time the invention was made to fabricate the frame of a group consisting of plastic, metal, and ceramic for the purpose of its durability.

Regarding claim 11, Snowman discloses, in figures 1 and 2, a flat type light condensing device arranged in an optical path device of an image readout device, wherein said frame (11-13)

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comprises a plurality of rectangular sub-frames (11-13) but does not specifically disclose that the frame is integrally formed of a material selected from a group consisting of plastic, metal or and ceramic material. It would have been obvious to fabricate the frame of a group consisting of plastic, metal, and ceramic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (In re Leshin, 125 USPQ 416). Therefore it would have been obvious to someone of ordinary skill in the art at the time the invention was made to fabricate the frame of a group consisting of plastic, metal, and ceramic for the purpose of its durability.

Regarding claim 12, Snowman disclose, in figures 1 and 2, a flay type light condensing device arranged in an optical path device of an image readout, wherein said plurality of lenses (16 and 20-22) are circular (col. 7, lines 34-42), and said first and second rectangular openings at two ends of said frame (11-13) comprise a rectangular light incidence region (26 and 27) and a rectangular light escape region (23), respectively (col. 4, lines 53-57 and col. 6, lines 64-67).

Regarding claim 13, Snowman discloses the claimed invention but does not specifically disclose wherein said lenses comprises a light incidence piece, a light condensing piece set and a light splitting piece, said light incidence piece has a size corresponding to a scan size of a scanner, said light splitting piece has a size corresponding to that of a charge coupled device, and said light condensing piece set is composed of more than one lens. Ushiro et al. discloses, in figures 3 and 4, a flat type light condensing device arranged in an optical path device of an image readout device, wherein said lenses (11, 12, 14, 16, and 17) comprises a light incidence piece (14), a light condensing piece set (13) and a light splitting piece (17), said light incidence piece has a size corresponding to a scan size of a scanner, said light splitting piece has a size



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corresponding to that of a charge coupled device, and said light condensing piece set is aspheric (col. 2, lines 53 and 54). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the device of Snowman with the light condensing, light splitting, and light incidence pieces of Ushiro et al. for the purpose of maintaining a light optical path (col. 2, lines 53 and 54).

Regarding claim 14, Ushiro et al. discloses, in figures 3 and 4, an optical path device for optical equipment, wherein an end of said flat type light condensing device near said reflecting device (15) is equal to or larger than an end of said flay type light condensing device near said OE converter (figure 4).

### *Response to Arguments*

6. Applicant's arguments filed 5/22/06 have been fully considered but they are not persuasive. Regarding claim 1, Snowman does disclose a hollow frame with rectangular cross-section (figure 1) (col. 4, lines 53-57 and 62-63; col. 7, lines 14-17; and col. 9, lines 16-20). Regarding the apertures (17, 18, and 28) of Snowman, apertures are openings or open space as recited by Webster's dictionary. Therefore Snowman does disclose opening at opposites ends of the light condensing device. Snowman does teach a plurality of lenses (11, 12, 14, and 16) located within the frame between the openings at opposite ends. Snowman includes a condensing lens (27) and a beam forming lens (16) that forms an image (col. 4, lines 55-57 and col. 5, lines 14-18).

*Conclusion*

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandi N. Thomas whose telephone number is 571-272-2341. The examiner can normally be reached on 7- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



BNT



Alicia M Harrington  
Primary Examiner  
Art Unit 2873